

# A STABLE SCHEME FOR SIMULATION OF INCOMPRESSIBLE FLOWS IN TIME-DEPENDENT DOMAINS AND HEMODYNAMIC APPLICATIONS

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We present a stable finite-element scheme for 3D flows of incompressible fluids in time-dependent domains. The time step is independent of the mesh size, and only one linear system is solved on each time step. We consider fluid-structure interaction (FSI) and Navier-Stokes equations in time-dependent domains. The properties of the scheme are shown on several benchmarks. We apply the scheme to patient-oriented simulation of flow in the human left ventricle.

## REFERENCES

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